293 Wright Street, Delavan, WI 53115
Phone: 1-800-468-7867
Fax: 1-800-390-5351
Web Site: SimerPump.com

OWNER'S MANUAL

PITMASTER Submersible Solids Handling Pump

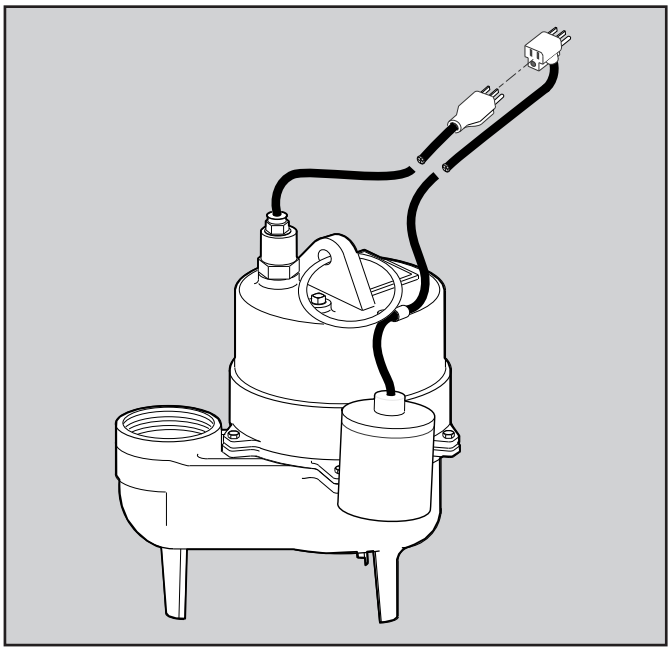
NOTICE D'UTILISATION

Pompe submersibles Pitmaster pour matières solides

MANUAL DEL USUARIO

Bomba sumergibles para el manejo de sólidos "Pitmaster"

ACE IN THE HOLE SERIES



3963

Installation/Operation/Parts

For further operating, installation, or maintenance assistance:

Call 1-800-468-7867

English . . . . . **Pages 2-6**

Installation/Fonctionnement/Pièces

Pour plus de renseignements concernant l'utilisation, l'installation ou l'entretien,

Composer le 1 (800) 468-7867

Français . . . . . **Pages 7-11**

Instalación/Operación/Piezas

Para mayor información sobre el funcionamiento, instalación o mantenimiento de la bomba:

Llame al 1-800-468-7867

Español . . . . . **.Páginas 12-16**

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SIM185 (6/17/2011)

READ AND FOLLOW SAFETY INSTRUCTIONS!

⚠ **This is the safety alert symbol.** When you see this symbol on your pump or in this manual, look for one of the following signal words and be alert to the potential for personal injury:

⚠DANGER warns about hazards that **will** cause serious personal injury, death or major property damage if ignored.

⚠WARNING warns about hazards that **can** cause serious personal injury, death or major property damage if ignored.

⚠ CAUTION warns about hazards that **will** or **can** cause minor personal injury or property damage if ignored.

The label ***NOTICE*** indicates special instructions which are important but not related to hazards.

Carefully read and follow all safety instructions in this manual and on pump.

Keep safety labels in good condition.
Replace missing or damaged safety labels.

1. Read this manual carefully. Failure to follow these instructions could cause serious bodily injury and/or property damage.
2. Check your local codes before installing. You must comply with their rules.
3. Vent sewage or septic tank according to local codes.
4. Do not install pump in any location classified as hazardous by National Electrical Code, ANSI/NFPA 70-1990.

⚠WARNING **Hazardous voltage. Can shock, burn or cause death.** During operation, the pump is in water. To avoid fatal shocks, proceed as follows if pump needs servicing:

5A. Disconnect power to outlet box before unplugging pump.
5B. Take extreme care when changing fuses. Do not stand in water or put your finger in fuse socket.
5C. Do not modify cord and plug. When using cord and plug, plug into a grounded outlet only. When wiring to a system control, connect pump ground lead to system ground.
6. Do not run pump dry. Dry running can overheat pump, (causing burns to anyone handling it) and will void warranty.
7. Pump normally runs hot. To avoid burns when servicing pump, allow it to cool for 20 minutes after shut-down before handling it.
8. In normal service, motor should not need oiling. Motor has been filled at the factory with a special oil.

INSTALLATION

(See Figure 1 for Typical Installation instructions.)

***NOTICE*: Pump must be level when operating.** If motor is tilted, internal start/run switch may overheat and damage motor.

⚠WARNING **Risk of electrical shock.** Can burn or kill. Do not lift pump by power cord. See "Cord Lift Warning" on Page 4. Do not hang pump from discharge pipe or power cord.

1. Install the pump on a solid, level foundation, or in a sump pit constructed of tile, concrete, steel or plastic. The recommended minimum diameter of the sump pit is 18" (46cm) diameter and the minimum recommended depth is 30" (76cm). Check local codes for approved materials.

   ***NOTICE*:** Pump should not be installed on clay, earth or sand surfaces. Clean the area around the pump of small stones and gravel which could clog the pump. Keep the pump inlet screen clear.
2. Thread a 2" discharge pipe into the pump 2" NPT discharge port. Be careful to avoid stripping or crossing threads.

Piping – Effluent Applications (3/4" or Less Solids)

Piping must be 1-1/2" minimum to carry volume of pump discharge. Check local codes to determine if a check valve is required in your system. In cold climates, check valves are not used to prevent effluent from freezing in piping.

SPECIFICATIONS

Model	H.P.	Voltage	Individual Branch Circuit Required (Amps)	Dual Element Time Delay Fuse Amps
3963	1/2	115	20	20

PERFORMANCE

	GPH (LITERS) AT DISCHARGE FT. OF HEAD				
	5 (1.5m)	**10 (3m)**	**15 (4.6m)**	**20 (6.1m)**	**25 (7.6m)**
3963	7320(27,709)	5400(20,441)	2700(10,221)	–	–

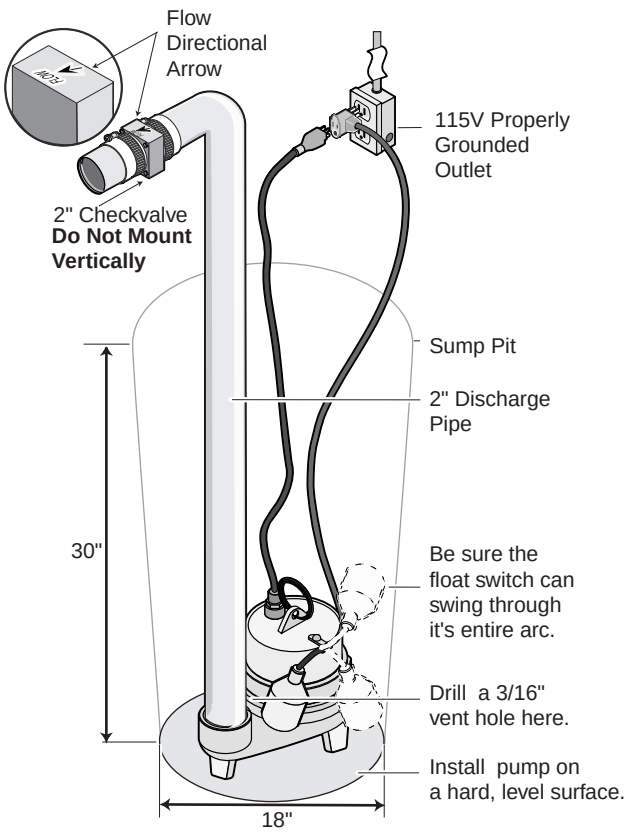


Figure 1

Piping – Sewage Applications (2" or Less Solids)

In any case, piping must not be smaller than pump discharge.

When installed in a sewage system, pipe must be capable of handling semi-solids of at least 2″ (5.1 cm) diameter.

The rate of flow in the discharge pipe must keep any solids present in suspension in the fluid. To meet minimum flow requirements (2 feet (.6 m) per second in discharge line), size pipe as follows:

A Pipe Size Of:	Will Handle a Flow Rate Of:
1-1/2” (3.8 cm)	12 GPM (45 LPM)
2” (5.1 cm)	21 GPM (79 LPM)
2-1/2” (6.3 cm)	30 GPM (113 LPM)
3” (7.6 cm)	48 GPM (181 LPM)

***NOTICE*:** Use PTFE pipe thread sealant tape on pipe connections. Do not use ordinary pipe joint compound on plastic pipe or pump. Pipe joint compound can attack plastics and damage pump.

3. To reduce motor noise and vibrations, a short length of rubber hose (1-5/8"(41mm) I.D., e.g. radiator hose) can be connected into discharge line near pump using suitable clamps.
4. If the pump discharge line is exposed to outside subfreezing atmosphere, then the portion of line exposed must be installed so any water remaining in pipe will drain to outfall by gravity. Failure to do this can cause water trapped in discharge to freeze which could result in damage to pump.
5. Install a 2″ check valve in the horizontal portion of the discharge pipe. Make certain, the flow indicating arrow, points away from the pump. This check valve will keep the water from either running back into the basin or into the area being pumped out when the pump is not running. Check valve should be a free flow valve that will easily pass solids.

***NOTICE*:** For best performance of check valve when handling solids, do not install it with discharge angled more than 45° above the horizontal. Do not install check valve in a vertical position as solids may settle in valve and prevent opening on startup.

6. Drill a 3/16″ (4.7mm) hole in discharge pipe about 1"-2″ (2.5 - 5.1cm) above pump discharge connection (but below check valve) to prevent airlocking the pump.
7. Insert the float switch piggy-back plug into a properly grounded outlet and the pump plug into the piggy-back plug.
8. Check the installation by observing the pump operation through one complete cycle. Make sure that no parts of the assembly interfere with the float switch.

⚠ CAUTION **Risk of flooding. May cause personal injury or property damage.** Failure to make this operational check may lead to improper operation, premature failure, and flooding.

ELECTRICAL

⚠WARNING **Hazardous voltage. Can shock, burn, or cause death.** When installing, operating, or servicing this pump, follow safety instructions listed below.

1. DO NOT splice the electrical power cord.
2. DO NOT allow electrical cord plug to be submerged.
3. DO NOT use extension cords. They are a fire hazard and can reduce voltage sufficiently to prevent pumping and/or damage motor.
4. DO NOT handle or service pump while it is connected to power supply.
5. DO NOT remove grounding prong from plug or modify plug.To protect against electrical shock, the power cord is a three-wire conductor and includes a 3-prong grounded plug. Plug pump into a 3-wire, grounded, grounding-type receptacle. Connect pump according to electrical codes that apply.

For automatic operation, plug or wire pump into an automatic float switch or pump controller. Pump will run continuously when plugged directly into an electrical outlet. Connect or wire pump to its own individual branch circuit with no other outlets or equipment in the circuit. Size fuses or circuit breakers according to chart on Page 2.

⚠WARNING **Risk of electrical shock and fire. Can burn or cause death.** Be sure that power supply information (Voltage/Hertz/Phase) on pump motor nameplate matches incoming power supply exactly. Install pump according to all electrical codes that apply.

OPERATION

NOTICE: Do not allow pump to run in a dry sump. It will void the warranty and may damage the pump.

An automatic overload protector in the motor will protect motor from burning out due to overheating/overloading. When motor cools down, overload protector will automatically reset and start motor.

If overload trips frequently, check for cause. It could be a stuck impeller, wrong/low voltage, or electrical failure in motor. If an electrical failure in the motor is suspected, have it serviced by a competent repairman.

Pump is permanently lubricated. No oiling or greasing is required.

SERVICE

⚠WARNING **Hazardous voltage. Can shock, burn, or cause death.** Before removing pump from basin for service, always disconnect electrical power to pump and control switch.

⚠WARNING **Risk of electrical shock. Can burn or kill.** Do not lift pump by power cord. See "Cord Lift Warning" below.

Submerge pump in a disinfectant solution (chlorox or chlorine) for at least one hour before disassembling pump.

The pump motor contains a special lubricating oil which should be kept clean and free of water at all times.

Check operation by filling sump with water and observing pump operation through one complete cycle.

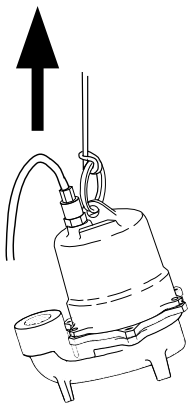
⚠ CAUTION **Risk of flooding. May cause personal injury or property damage.** Failure to make this operational check may lead to flooding and premature failure.

NOTICE: This unit is not designed for applications involving salt water or brine! Use with salt water or brine will void warranty.

CORD LIFT WARNING

⚠ WARNING

Risk of electrical shock.
Can burn or kill.
Do not lift pump by power cord.

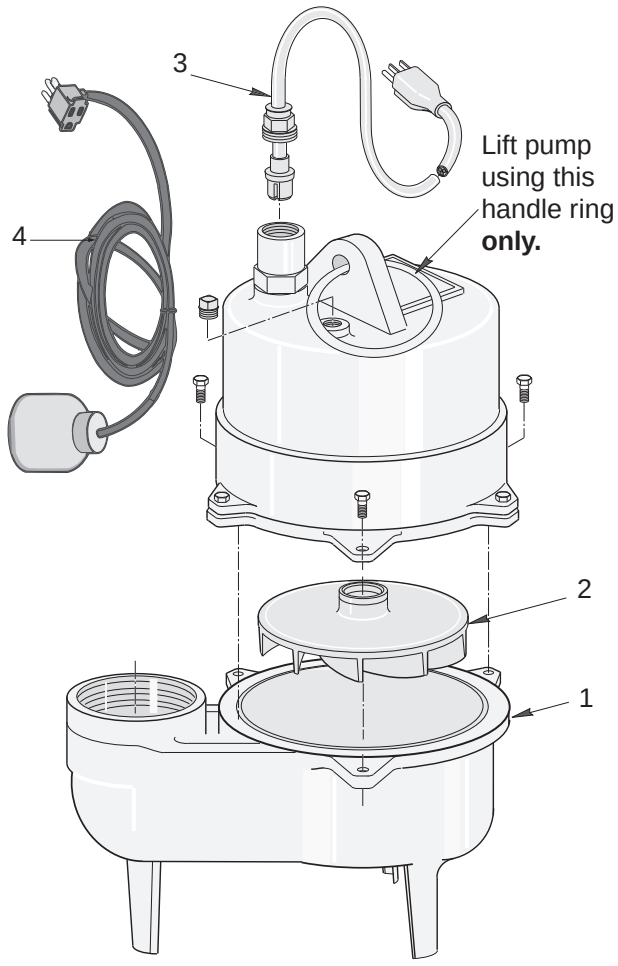


1. Attempting to lift or support pump by power cord can damage cord and cord connections.
2. Cord may pull apart, exposing bare wires with possibility of fire or electrical shock.
3. Lifting or supporting pump by power cord will void warranty.
4. Use lifting ring or handle on top of pump for all lifting/lowering of pump. Disconnect power to pump before doing any work on pump or attempting to remove pump from sump.

TROUBLESHOOTING

⚠WARNING Risk of sudden starts. Can result in electrical shock or pinching of hands or tools. If power to pump is on when thermal overload resets, pump may start without warning. Disconnect power before servicing pump.

A. Pump fails to operate:	1. Check to be sure that power cord is securely plugged into outlet. Disconnect power to outlet before handling pump or motor. 2. Check to be sure you have electrical power. 3. Check that liquid fluid level is high enough to activate switch or controller. 4. Check to be sure that 3/16" (4.7 mm) vent hole in discharge pipe is not plugged. 5. Check for blockage in pump inlet, impeller, check valve or discharge pipe. 6. Thermal overload may have tripped. Test start pump; if it starts and then stops immediately, disconnect from power source for 30 minutes to allow motor to cool, then reconnect to power source. Check for cause of overheating/overloading. 7. Check the float switch operation for maximum possible clearance.
B. Pump fails to empty sump:	1. Be sure all valves in discharge valve are fully open. 2. Clean out discharge pipe and check valve. 3. Check for blockage in pump inlet or impeller. 4. Pump not sized properly. A higher capacity pump may be required. 5. Check the float switch operation for maximum possible clearance.
C. Pump will not shut off:	1. Check switch or controller automatic floats for proper operation, location and clearance. See installation instructions for switch/controller. 2. If pump is completely inoperative or continues to malfunction, consult your local serviceman.



REPAIR PARTS LIST

Key No.	Part Description	Qty	3963 115 Volt
1	Volute	1	PW1-13
2	Impeller	1	PW5-11P
3	Power Cord	1	PW117-237-TSE
4	Automatic Float Switch	1	PS117-145P

IF MOTOR FAILS, REPLACE PUMP.

Retain Original Receipt For Warranty Eligibility

Limited Warranty

This Limited Warranty is effective June 1, 2011 and replaces all undated warranties and warranties dated before June 1, 2011.

SIMER warrants to the original consumer purchaser ("Purchaser" or "You") that its products are free from defects in material and workmanship for a period of twelve (12) months from the date of the original consumer purchase. If, within twelve (12) months from the original consumer purchase, any such product shall prove to be defective, it shall be repaired or replaced at SIMER's option, subject to the terms and conditions set forth herein. Note that this limited warranty applies to manufacturing defects only and not to ordinary wear and tear. All mechanical devices need periodic parts and service to perform well. This limited warranty does not cover repair when normal use has exhausted the life of a part or the equipment.

The original purchase receipt and product warranty information label are required to determine warranty eligibility. Eligibility is based on purchase date of original product – not the date of replacement under warranty. The warranty is limited to repair or replacement of original purchased product only, not replacement product (i.e. one warranty replacement allowed per purchase). Purchaser pays all removal, installation, labor, shipping, and incidental charges.

For parts or troubleshooting assistance, DO NOT return product to your retail store. Contact SIMER Customer Service at 1-800-468-7867.

Claims made under this warranty shall be made by returning the product (except sewage pumps, see below) to the retail outlet where it was purchased or to the factory immediately after the discovery of any alleged defect. SIMER will subsequently take corrective action as promptly as reasonably possible. No requests for service will be accepted if received more than 30 days after the warranty expires. Warranty is not transferable and does not apply to products used in commercial/rental applications.

Sewage Pumps

DO NOT return a sewage pump (that has been installed) to your retail store. Contact SIMER Customer Service. Sewage pumps that have seen service and been removed carry a contamination hazard with them.

If your sewage pump has failed:

- Wear rubber gloves when handling the pump;
- For warranty purposes, return the pump's cord tag and original receipt of purchase to the retail store;
- Dispose of the pump according to local disposal ordinances.

Exceptions to the Twelve (12) Month Limited Warranty

Product	Warranty Period
BW85P, M40P	90 days
2115, 2300, 2310, 2330, 2943, 2955, 2956, 2957, A5500	2 Years
4" Submersible Well Pumps, 2945, 2958, 2975PC, 3075SS, 3963, 3984, 3995	3 Years
Pre-Charged Pressure Tanks, 3985, 3986, 3988, 3989, 5910, 5950, 5955, 5965, 5975	5 Years

General Terms and Conditions; Limitation of Remedies

You must pay all labor and shipping charges necessary to replace product covered by this warranty. This warranty does not apply to the following: (1) acts of God; (2) products which, in SIMER's sole judgment, have been subject to negligence, abuse, accident, misapplication, tampering, or alteration; (3) failures due to improper installation, operation, maintenance or storage; (4) atypical or unapproved application, use or service; (5) failures caused by corrosion, rust or other foreign materials in the system, or operation at pressures in excess of recommended maximums.

This warranty sets forth SIMER's sole obligation and purchaser's exclusive remedy for defective products.

SIMER SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, OR CONTINGENT DAMAGES WHATSOEVER.

THE FOREGOING LIMITED WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE FOREGOING LIMITED WARRANTIES SHALL NOT EXTEND BEYOND THE DURATION PROVIDED HEREIN.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to You. This warranty gives You specific legal rights and You may also have other rights which vary from state to state.

SIMER • 293 Wright Street • Delavan, WI U.S.A. 53115
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